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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,776	02/07/2002	Paul J. Cornay	A01007US (16873.10)	3582

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EXAMINER

BINDA, GREGORY JOHN

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/071,776	CORNAY ET AL.	
	Examiner	Art Unit	
	Greg Binda	3679	

-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 51-57 is/are pending in the application.
- 4a) Of the above claim(s) 10, 11, 18, 19 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-17, 20-27 and 51-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 6. 6) ☐ Other: _____

Election/Restrictions

1. Applicant's election without traverse of Species V shown in Figs. 24-31 in Paper No. 8 is acknowledged.
2. Claims 10, 11, 18, 19 & 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because reference numerals 521 & 529 appear on page 12, lines 1 & 2 but do not appear in the drawings.

Specification

4. The listing of references in the specification as at the top of page 2 and the bottom of page 12 is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.
5. The disclosure is objected to because page 7, line 23, mentions bores 327 & 328 but in Fig. 15 reference numerals 327 & 328 do not appear to identify bores. (Note reference numerals

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316 & 317 appear to identify bores. See Fig. 16 and page 8, lines 22 & 23 and page 17, lines 19 & 20.)

6. The specification is objected to as failing to comply with 37 CFR 1.71 and 1.75(d)(1) because the detailed description of the elected species fails to provide proper antecedent basis for the following claimed subject matter:

- a. Claims 4, 5 & 14: all limitations therein.
- b. Claim 16 item (d).
- c. Claim 51, lines 6-10
- d. Claim 56, lines 6-10

7. The abstract of the disclosure is objected to because it abstracts only an unelected species.

Claim Objections

8. The claims are objected to as failing to comply with 37 CFR 1.75(g) because the least restrictive claim is not presented as claim number 1. Claims 7, 12, 13, 16 & 25 each appear to be less restrictive than claim 1.

9. Claim 25 is objected to as failing to comply with 37 CFR 1.75(i) because elements of the claims are not separated by line indentation.

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10. Claims 14 & 51-57 are objected to because:
- a. Claim 14, line 2 recites ‘the coupling means has an axis of rotation’ but on page 9, line 19 the coupling means is described as having multiple axes of rotation.
 - b. In claim 14, line 3 the word “perpendicular” is misspelled.
 - c. Claims 51 & 56, lines 12 & 13; claims 52 & 57, lines 6 & 7; and claims 53-55, lines 9 & 10 recite that the axes of the coupling means and first cam rod intersect where “they” intersect one other. Thus begging the question – where else would they intersect?
 - d. Claims 51 & 56, lines 14 & 15; claims 52 & 57, lines 8 & 9; and claims 53-55, lines 11 & 12 recite that the axes of the coupling means and second cam rod intersect where “they” intersect one other.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 51-57 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has not pointed out where the following limitations are supported, nor

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does there appear to be a written description of the limitations in the application as originally filed:

- a. Claim 51: lines 11+
- b. Claim 52, lines 5+
- c. Claim 53, lines 8+
- d. Claim 54, lines 8+
- e. Claim 55, lines 8+
- f. Claim 56: lines 11+
- g. Claim 57, lines 5+

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 7, 12, 16, 17, 25 & 27 are rejected under 35 U.S.C. 102(b) as being anticipated by McIntosh, US 3,429,144.

- a. Claims 7 & 12. Figs. 1-3 show a universal joint comprising: a first shaft 46; a second shaft 47; coupling means 12 for transmitting torque from the first shaft to the second shaft; and centering means 35 interconnecting the first and second shaft for causing the second shaft to move at the same angle relative to the coupling means as the first shaft.

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Fig. 2 shows the centering mean comprises a first cam rod 39 and a second cam rod 40 longitudinally aligned at equal angles within a cam tube 41, 42.

b. Claims 16 & 17. Figs. 1 & 2 show a universal connector comprising: a first cam rod 39; a second cam rod 40; a cam tube 41, 42, wherein the first cam rod is rotatably coupled to the second cam rod and wherein both cam rods are rotatably supported at equal angles within the cam tube; and connection means 36, 37, 43, 44 for connecting the first cam rod to a first shaft 46 and the second cam rod to a second shaft 47

c. Claims 25 & 27. Figs. 1 & 2 show a centering means 35 for a universal joint comprising first and second shafts 46 & 47 and a coupling means 12 for transmitting torque from the first shaft to the second shaft, the centering means including means 38 for causing the second shaft to move at the same angle relative to the coupling means as the first shaft. Fig. 2 shows the centering mean comprises a first cam rod 39 and a second cam rod 40 longitudinally aligned at equal angles within a cam tube 41, 42.

15. Claims 7, 12, 16, 17, 25 & 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Orain, US 3,792,597.

a. Claims 7 & 12. Fig. 2 shows a universal joint comprising: a first shaft 11; a second shaft 12; coupling means 17 for transmitting torque from the first shaft to the second shaft; and centering means interconnecting the first and second shaft for causing the second shaft to move at the same angle relative to the coupling means as the first shaft. Fig. 2 shows the centering mean comprises a first cam rod 20 and a second cam rod 24 longitudinally aligned at equal angles within a cam tube 13a, 14a.

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b. Claims 16 & 17. Fig. 2 shows a universal connector comprising: a first cam rod 20; a second cam rod 24; a cam tube 13a, 14a, wherein the first cam rod is rotatably coupled to the second cam rod and wherein both cam rods are rotatably supported at equal angles within the cam tube; and connection means 13, 14 for connecting the first cam rod to a first shaft 11 and the second cam rod to a second shaft 12

c. Claims 25 & 27. Fig. 2 shows a centering means for a universal joint comprising first and second shafts 11 & 12 and a coupling means 17 for transmitting torque from the first shaft to the second shaft, the centering means including means 21, 25 for causing the second shaft to move at the same angle relative to the coupling means as the first shaft. Fig. 2 shows the centering mean comprises a first cam rod 20 and a second cam rod 24 longitudinally aligned at equal angles within a cam tube 13a, 14a.

16. Claims 7, 13, 14, 20, 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Ibister, US 5,967,004.

a. Claims 7, 13, 20 & 25. Figs. 1 & 2 show a universal joint comprising: a first shaft 28; a second shaft 10; coupling means 36, 38 for transmitting torque from the first shaft to the second shaft; and centering means interconnecting the first and second shaft for causing the second shaft to move at the same angle relative to the coupling means as the first shaft. Fig. 2 shows the centering means comprises a first cam rod 30 and a second cam rod 34 longitudinally aligned with and rotatably connected to the first cam rod by a plurality of bent rods 32.

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b. Claim 14. Fig. 2 shows the first cam rod 30 is perpendicular to the second cam rod 34.

17. Claims 7, 13, 14, 20, 25 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Beden, US 3,782,135.

18. Claims 7-9, 12-17, 25-27, 52-55 & 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson, US 731,225.

a. Claims 7, 13 & 25. Fig. 1 shows a universal joint comprising: a first shaft 5; a second shaft 6; coupling means 15, 16 for transmitting torque from the first shaft to the second shaft; and centering means interconnecting the first and second shaft for causing the second shaft to move at the same angle relative to the coupling means as the first shaft. Fig. 2 shows the centering means comprises a first cam rod 11 and a second cam rod 12 longitudinally aligned with and rotatably connected to the first cam rod by a plurality of bent rods 9 & 20.

b. Claim 8 & 26. Fig. 1 shows the first cam rod 11 includes a first straight section 11a and second straight section perpendicular to the first. Fig. 1 shows the first cam rod 12 includes a first straight section 12a and second straight section perpendicular to the first.

c. Claims 9, 12, 15 & 27. Fig. 1 shows both cam rods 11 & 12 are rotatably supported at equal angles within a cam tube 1.

d. Claim 14. Fig. 1 shows the first cam rod 11 is perpendicular to the second cam rod 12.

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e. Claims 16 & 17. Fig. 1 shows the first cam rod 11 is connected to shaft 5 and the second cam rod 12 is connected to shaft 6.

f. Claims 52-55 & 57. Fig. 1 shows the coupling means 15 has a longitudinal axis that intersects the intersection of the axes of rotation of the first and second straight sections of the first cam rod 11. Fig. 1 shows the coupling means 16 has a longitudinal axis that intersects the intersection of the axes of rotation of the first and second straight sections of the first cam rod 12.

19. Claims 1, 2, 5, 7, 12, 16, 20, 23, 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Cornay, US 5,425,676. Figs. 2 & 3 show a universal joint comprising: first and second rings 15 which each comprise two segments 17 & 19 connected end to end; first and second yokes 11 disposed within the first and second rings 15; first and second shafts 14; first/third pin means 21 interconnecting the first/second yoke 11 and the first/second ring 15; second/fourth pin means 22 interconnecting the first/second shaft 14 and the first/second ring 15; a coupling means 213 interconnecting the first and second yokes 11; a plurality of bearing means 31 receiving the pin means (see also Fig. 1). Fig. 15 shows the universal joint includes centering means comprising first and second cam rods 771 that rotatably coupled together within a cam tube 778

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornay in view of Wikoff, US 1,670,175. Cornay shows all the limitations of the claims except the ring segments of rings 15 are not shown as substantially identical quadrants. Wikoff shows in Fig. 2 a ring formed from ring segments (each two adjacent segments 2) which are substantially identical quadrants. On page 1, lines 13-17 and lines 89-95, Wikoff teaches making the ring from these substantially identical quadrants in order to provide a means for limited axial motion. It would have been obvious to one of ordinary skill in the art to modify the universal joint of Cornay by making the ring segments of the first and second rings from substantially identical quadrants in order to provide a means for limited axial motion as taught by Wikoff.

Double Patenting

22. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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23. Claims 1-9, 12-17, 20-27 & 51-57 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of U.S. Patent No. 6,251,020. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the combinations covered by the instant claims are covered by the claims of the patent.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Grote shows a universal joint..

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can normally be reached Monday through Thursday from 9:30 am to 7:00 pm. The examiner can also be reached on alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne, can be reached on (703) 308-1159. The fax phone number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



**GREGORY J. BINDA
PRIMARY EXAMINER**